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ABSTRACT

This investigation extends previous research on the benefits of dance education, by further exploring the correlates of participation in dance classes for adolescent girls. The survey evaluated self-esteem, body image, dance ability, and perceived quality of peer and parent relationships. Students with greater dance experience were expected to report higher levels of perceived success, attractiveness, body awareness, and time management skills. The majority of students (77%) saw dance class as having improved their level of self-discipline. The majority (85%) also did not find that dance class made them hate their bodies. Girls who scored high on dance efficacy seemed to feel more attractive while dancing in addition to feeling more attractive at school. The parental support findings show a congruence between girls' and their parents' attitudes toward this activity. In assessing the potential harm of dance instruction, the 15% of students who reported hating their bodies as a result of dance were further evaluated. It was determined that body image played a great role in how they perceived this activity. It suggests that changes in how dance education is presented could make it possible to extend the current benefits to a greater percentage of participants. (Contains 16 references.) (JDM)

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The Correlates of Dance Education among Adolescent Girls

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Abstract

This investigation extended previous work on the benefits of dance education, by further exploring the correlates of participation in dance classes for adolescent girls. An author-devised survey assessed age, grade, number of years of dance education, number of years at particular dance schools, sibling gender and participation in dance education. Self-esteem, body-image, dance ability, and perceived quality of peer and parent relationships were evaluated using four-point Likert-format items (4= strongly agree to 1=strongly disagree):. Information on pre-dance class behavior and inhibitions about dancing in front of others was obtained using a five-point Likert-format scale, (item scores ranged from 5= always to 1= never.). The girls were also asked to rate their dance ability, their attractiveness as compared to other girls in school, and several emotions experienced while dancing, using ten-point scale items (10= highest and 1= lowest.). To assess extraversion, the 22-item Extraversion subscale of the Eysenck Personality Inventory (Eysenck & Eysenck, 1963) was used. An open-ended question about the influence of dance education concluded the survey. Students with greater dance experience were expected to report higher levels of perceived success, attractiveness, body-awareness, and time management skills. Extraversion was expected to mediate some of these effects, since a pilot study (Vicario & Chambliss, 2001) had found this to be the case

Introduction

Dance education has long provided girls with a form of artistic expression that also offers myriad exercise benefits. It offers an opportunity for aerobic exercise and

conditioning that is more appealing to many girls than competitive group sports. Since physical activity is important for health reasons and contributes to the overall psychological well-being of an individual, participation in dance education is expected to correlate with a variety of positive characteristics. Previous research has demonstrated that programs that encourage individuals to be physically active aid in the development of various positive psychological and physical attributes (Kravitz and Furst, 1991). Exercise was identified by the U.S.Public Health Service as one of the 15 behavioral interventions most likely to reduce death and disease (Wraith & Duncan, 1991). Wraith and Duncan found that exercise involvement enhanced both physical and psychological well-being. Regular exercise reduces cardiovascular risk factors such as obesity, hypertension, and elevated blood lipids. Exercise ha been related to improved psychological functioning, reduction of depression, and improvement in self-esteem, body image, and perceptions of control (Wraith & Duncan, 1991). Challenging, but not overwhelmingly difficult, tasks seem to provide the greatest satisfaction to those involved with physical exercise. Such participation apparently leads to increases in self-efficacy, which in turn positively influences intrinsic motivation and results in greater subsequent participation (Wraith & Duncan, 1991). Dance education is usually designed to provide gradually increasing levels of difficulty to students. Classes are usually developed to group those of similar ability and experience, in order to offer students an experience that is challenging without being overwhelming.

Since body image is of tremendous concern to females in our culture, dance education is often appealing because it is seen as a strategy for enhancing physical fitness and grace. Since dance experience can improve physical appearance and build motor

confidence and skills, participating in dance may be a way of addressing specific vulnerabilities associated with adolescence for girls. Previous research on adolescent girls has indicated that many of them are at high risk of self-consciousness, fragile body-image, and feelings of inferiority. In response to these problems, many girls become less assertive and quite uncomfortable in public situations. Dance education may provide one way of maintaining girls' comfort with their bodies and increasing their perceived efficacy and intrinsic motivation for remaining physically active.

Pipher (1994) and Hoff-Sommers (2000) have articulated differing views of the plight of adolescent girls. Pipher (1994) depicts teenaged girls as special victims in our culture, vulnerable to reduced self-esteem for a variety of reasons. While sensitive to the challenges faced by adolescent girls, Hoff-Sommers (2000) argues that boys may often be even more victimized by our current culture.

According to Pipher's view, sexist messages in advertising, deriving from male domination of the economic sphere, often contribute to young girls' loss of self-esteem. Pipher argues that a girl's transition into adolescence marks the beginning of a multitude of changes, both physically and cognitively. Pipher sees girls as going one of four ways during adolescence; they can conform, withdraw, be depressed, or get angry. "Many girls lose contact with their true selves, and when they do, they become extraordinarily vulnerable to a culture that is all too happy to use them for its purposes" (Pipher, 1994, p.44).

According to Pipher, the reasons for these changes can be identified through the different dimensions of the self. The physical self is changing in size, shape, and hormonal structure. Girls are suddenly more aware of societal standards, and begin to feel pressured

to look thin and be beautiful. Emotionally, adolescent girls are intense, dynamic, and easily upset, "The emotional system is immature in early adolescence. Emotions are extreme and changeable" (Pipher, 1994, p. 57). The third dimension of self, thinking, involves difficulties because early adolescents have trouble thinking abstractly. As a result, reasoning with them is a struggle. Overpersonalizing stares and casual remarks is often problematic during this stage of life. The academic self faces challenges in school, where Pipher contends that boys are treated differently than girls. "In classes, boys are twice as likely to be seen as role models, five times as likely to receive teachers' attention, and twelve times as likely to speak up in class" (Pipher, 1994,p. 62). The differences in treatment, as well as expectations (for boys: clever, brave and resourceful, for girls: kind, dependant and docile) create discrimination in many school settings. The social self confronts challenges with both family and peers. Parents try to protect their daughters and often unknowingly limit their independence. Social pressures are applied by peers on teens to separate from parental figures and to become autonomous. Girls have difficulties because they simultaneously want to be close to their parents, yet want acceptance from their peers. "Peers validate their decisions and support their new independent selves" (Pipher, 1994 p. 67). Many parents report that their daughters pick fights with their parents and hate being touched by them. The last dimension of self discussed by Pipher is the spiritual self. Pipher sees adolescence as a time of religious crisis and exploration of universal questions, mainly about death and suffering. She notes that during this developmental period, girls tend either to become deeply religious or temporarily abandon practicing religion. According to Pipher, conflicts relating to these various aspects of self make adolescence one of the roughest times of life for many females.

On the other hand, Hoff-Sommers (2000) has challenged this notion that girls are more vulnerable to conflict and its resulting distress than boys. In her book, *The War Against Boys*, she expresses her thoughts about this issue.

> It's a bad time to be a boy in America. As the century drew to a close, the defining event for girls was the triumph of the U.S. women's soccer team. For boys, the symbolic event was the mass killing at Columbine High School. It would seem that boys in our society are greatly at risk. Yet the best-known studies and the academic experts say that it's girls who are suffering from a decline in self-esteem. It's girls, they say, who need extra help in school and elsewhere in a society that favors boys. The problem with boys is that they are boys, say the experts. We need to change their nature. We have to make them more like...girls. (Hoff-Sommers, 2000, p. I).

Hoff-Sommers challenges both Pipher (1994) and Gilligan's (1990) contention that adolescent girls are in crisis more so than boys. Hoff-Sommers sites empirical findings showing higher levels of well-being among adolescent girls than among boys. She challenges the validity of many of Pipher and Gilligan's conclusions. Hoff-Sommers points out that Pipher based her characterization of adolescent girls on specific cases which may not be generalizable to the population at large.

Hoff-Sommers reports findings that support the notion that boys are having more difficulty in high school than girls. Statistics show that more girls than boys are taking Advanced Placement exams during their senior year of high school (144 females vs. 117 males per 1000 12^{th} graders). Secondly, more female than male students currently enroll in high level math and science courses in high school. Similarly, more girls than boys are involved in extracurricular activities in high school, with the exception of team sports.

> Girls read more books. They outperform males on tests of artistic and musical ability. More girls than boys study abroad. More join the Peace Corps. Conversely, more boys than girls are suspended from school. More are held back and more drop out. Boys are three times as likely as girls to be enrolled in special education programs and four times as likely to be diagnosed with

> attention deficit/hyperactivity disorder (ADHD). More boys than girls are involved in crime, alcohol and drugs. Girls attempt suicide more than boys, but it is boys who actually kill themselves more often. In a typical year (1997), there were 4,493 suicides of young people between the ages of five and twenty-four: 701 females, 3,792 males. (Hoff-Sommers, 2000, p. 25-26).

Regardless of whether adolescence is differentially challenging for males and females, Pipher, Gilligan, and Hoff-Sommers all agree that adolescence is a difficult time for many individuals. Tumultuous changes during this period affect relationships and academic performance. The need for self-expression seems to mount during this dynamic phase of life. Ideally, if self-expression can be achieved in a constructive manner, adolescents may not feel as much pressure to choose destructive ways of defining their identities.

A few researchers have explored the effects of dance on adolescent girls' self image. Body image has been an area of specific interest because of the risks associated with a poor body image. Radell, Adame and Johnson studied body image and locus on control using a two-group design; (dancers versus non-dancers). Both the Winstead and Cash 54-item Body Self-relations Questionnaire (Winstead and Cash, 1984) and the Adult Nowicki-Strickland Internal-External Control Scale (Nowicki, 1991) were administered to 32 college students in a dance class and 26 students enrolled in a personal health class. Physical aesthetics (appearance), physical competence (fitness), and biological integrity (health), were components of the Body image Scale. The survey consisted of 54 Likert-style items (1= definitely disagree and 5= definitely agree). For the locus of control survey, subjects answered yes or no to items. Both a pretest, (presented during second and third weeks of the semester), and post test, (presented during the final week of the semester) were given.

Dancers scored more internally on locus of control in the pretest than non-dancers, but there were no significant differences between groups on the posttest. Subjects, overall, scored more internally on the pretest than on the posttest. Dancers' fitness evaluation scores went from low to high over the semester, whereas non-dancers' scores went from high to low. Increasing scholastic demands may have affected posttest scores. Another possible explanation for the differences in the fitness orientation subscale of the Body-Self Relations Questionnaire was that dancers' "physical, mental and creative talents, coupled with actual involvement in the dance experience, result in a fuller perception of the demands of dance activities and leads to a more realistic vision of their developmental level in the creative movement arts" (Radell et al, 1993 p.512).

Similarly, Lewis and Scannell (1995) conducted a study on the relationship between body image and participation in creative dance movement activities. This study included 112 women ranging in age from 18-69, who had been participating in dance courses for periods of time ranging from 2 weeks to 16.5 years. The data suggested that subjects with more experience in creative dance movement classes were more satisfied with their appearance, fitness, and body parts than those subjects with less than five years of experience. Lewis and Scannell note that given these findings and the potential for incorporating creative dance movement experience in a clinical setting for people with body-image disturbances, additional empirical research on this relationship between creative dance movement and body image is warranted (Lewis and Scannell, 1995).

Sandra Minton (2000) sought to link a multitude of studies together in order to demonstrate the relationship between self-esteem and dance involvement. Minton reviewed 24 studies conducted between 1973 and 1999, testing participants from various

educational levels. Different dance forms included in these studies were: creative/explorative, ethnic/folk, aerobic and ballroom, plus a specially designed general dance curricula. The majority of these studies found creative or explorative dance to have positive effects on the psychological variables studied. Similarly, research involving aerobic dance (Kamal and Blais, 1995); ethnic and folk dance (Trujillo, 1979); and ballroom dance (Taylor, 1977) produced significant benefits (Minton, 2000).

According to Minton, these findings could be due to a sense of connectedness to others experienced while dancing. In fact, other researchers have found that students identified a sense of belonging and connectedness with dance exploration. Minton's study in 1999 showed a significant improvement in social self-esteem among students who enrolled in just one dance class. It was also found that dance improves the physical aspects of self-concept (Trujillo 1979, in Minton 2000). In most of the 24 studies Minton reviewed, dance positively affected self-concept.

Dance also provides a means of expressing feelings and emotions. A study on Indian dance considered nine primary emotions and modes of expressing them through dance. These emotions were anger, disgust, fear, heroism, humor-amusement, love, peace, sadness and wonder (B.B., 2000). "Natives of both the United States and India shown videotapes of these dances identified the emotions accurately in two out of three trials, a new study finds (B.B., 2000). Videotapes were watched in random order by a total of 48 U.S. college students, ages 18-25, and 47 Hindu Indians, ages 18-40. Ten emotions were listed including the nine referred to earlier plus a "neutral/no emotion" option. Due to cultural differences and awareness of cultural dance, Indian volunteers more often detected the portrayals of shame-embarrassment, peace and heroism. It is

suggested that those emotions may have more meaning in Indian dance and Indian culture. Researchers have also explored strategies for maintaining participation in dance activities. Much of this work is based on college-aged samples. In a study examining 254 female and 11 male young adults, McAuley et al (1991) found perceived success to enhance intrinsic motivation to participate in aerobic dance activities. In a University setting, Kravitz and Furst (1991) found use of extrinsic rewards to improve aerobic dance class attendance.

The purpose of the current study was to examine the correlates of adolescent girls' involvement in formal dance training, and to attempt to replicate the findings of an earlier pilot study (Vicario & Chambliss, 2001). Dance may act as an outlet for adolescent girls and give them confidence, but at the same time it may pose some risks associated with perceived body image. Despite considerable conjuncture about the positive impact of dance participants, some have expressed concerns about the higher ratio of eating disorders among dancers than non-dancers, and prevalence of negative body image among dancers. This has led to debates over whether dance classes have a positive or negative effect on students' body image. It is hypothesized that adolescent girls benefit from taking dance classes, however, each may do so in a different fashion. For instance, improvements associated with exercise, coordination and time management may help to shape a young girl into a more responsible young woman. On the other hand, some girls may benefit from working collectively with peers and enjoying the social aspects that dance class provides. In addition, girls who rate themselves as more talented dancers are expected to have higher self-esteem than girls who feel they are not quite as talented.

Methods

Subjects were adolescent girls ranging in age from 13-20, enrolled in dance classes from four different dance schools, three in Pennsylvania and one in New Jersey. The mean age of participants was 14.72 and the total number of participants was 53. Multiple factors were assessed using a survey composed of several sections. General background information assessing age, grade, number of years they have taken dance lessons, number of years they have been at the same dance school, sibling gender, and whether their sibling was involved in dance. The following variables were evaluated using a four point Likert-format scale (4= strongly agree to 1= strongly disagree): self-esteem, body image, dance ability, and peer and parent relationships. Information on behavior in preparation before dance classes and inhibitions about dancing in front of others was obtained using a five point Likert-format scale. (Item scores ranged from 5= always to 1= never.) The girls were also asked to rate their dance ability, their attractiveness as compared to other girls in school, and several emotions experienced while dancing. This was done using a ten point scale (10= highest and 1= lowest). To assess extraversion, the 22-item Extraversion subscale from the Eysenck Personality Inventory (Eysenck & Eysenck, 1963) was used. An optional open-ended question addressed what dance has meant to the subject.

The survey was distributed to students attending four different dance schools, ranging in age, ability and dance experience. The dance schools were divided into two categories: competitive versus non-competitive. Participants were enrolled in one or more different dance forms, including jazz, ballet, pointe, tap and modern.

Results

Frequency distributions illustrated that the majority of dance students (77%) reported that dance improved their level of self discipline. A similar majority (76%) agreed that dance helped them to release their feelings. Almost all dance students (85%) did not believe that dancing made them hate their bodies. Likewise, only 19% said that dance made their life extremely hectic. Almost all participants (92%) did not report feeling anxious or worried while at dance classes.

The majority (81%) felt that dance helped to improve their concentration and most (68%) reported feeling more confident while dancing. Most of the students (89%) reported feeling better while dancing. Of the 53 students surveyed, 49% did not attend a highly competitive dance school, however, the remaining 51% were involved in competitive dance.

A median split was used to create low and high dance experience groups. Between group t-tests showed that girls with more dance experience reported feeling more confident while dancing than those with less dance experience (more dance experience: $\bar{x} = 7.79$, s.d= 1.75, n= 28 versus less dance experience: $\bar{x} = 6.60$, s.d= 2.02, n= 25; t= 2.29, df= 1, $p<.026$). Girls with greater dance experience also felt happier at dance class than those with less experience (high dance experience: $\bar{x} = 3.67$, s.d= .49, n=15 versus low dance experience: $\bar{x} = 3.27$, s.d= .47, n=11; t= 2.07, df= 24, $p<.05$). No significant group differences were found on measures of comfort with one's appearance whether dance helped one organize time, or whether dance acted as a mechanism for releasing feelings. Girls with greater experience did not report significantly greater enjoyment while performing in front of an audience than those with low experience. Girls

with greater experience also did not report practicing dance at home alone more than girls with less experience.

In another set of analyses, a median split was used to create low and high dance efficacy groups. Between group t-tests showed that girls with higher dance efficacy were less likely to see dance education as teaching discipline than those with low dance efficacy (high dance efficacy: $\bar{x}$ = 2.83, s.d.= .95, n=35 versus low dance efficacy: $\bar{x}$ = 3.61, s.d= .78, n=18, t= 3.00, df= 51, p<.004). Both groups of girls did not see dance class as making them critical of their bodies; however, girls with high dance efficacy reported feeling both more attractive at dance class (high dance efficacy: $\bar{x}$ = 7.14, s.d= 1.99, n=35 versus low dance efficacy: $\bar{x}$ = 5.83, s.d= 1.79, n=18, t= 2.35, df=51, p<.03) and more attractive at school (high dance efficacy: $\bar{x}$ = 7.29, s.d= 1.47, n=35, versus low dance efficacy: $\bar{x}$ = 6.00, s.d= 1.78, n=18, t= 2.81, p<.007). Low dance efficacy resulted in feelings of clumsiness while dancing (high dance efficacy: $\bar{x}$ = 1.49, s.d.=.56 , n= 35 versus low dance efficacy: $\bar{x}$ = 1.94, s.d.= .54, n= 18; t= 2.85, df= 51, p<.006). In addition, those girls who rated their dance ability as high reported feeling more relaxed at dance than those who rated their dance ability as low (high dance efficacy: $\bar{x}$ = 7.77, s.d= 1.78, n= 35 versus low dance efficacy: $\bar{x}$ = 6.22, s.d= 2.46, n= 18; t= 2.62, df= 51, p<.01). Age had no effect on ratings of dance efficacy.

Dancers were then separated into two categories; girls at competitive dance schools versus girls attending non-competitive dance schools. Data was obtained at two competitive dance schools (n=27) and two non-competitive dance schools (n=26). Competitive dancers were more likely to feel self-conscious in dance clothes (competitive:

$\bar{x}$=2.15, s.d= .72, n=27 versus non-competitive: $\bar{x}$ = 1.62, s.d= .75, n=26, t=2.64, df= 51, p<.01). Likewise, competitive dancers were less likely to eat dinner before dance class than non-competitive dancers (competitive: $\bar{x}$=3.00, s.d= 1.18, n=27 versus non-competitive: $\bar{x}$ = 3.65, s.d= 1.20, n=26, t=2.00, df= 51, p<.05). Non-competitive dancers reported feeling more clumsy while dancing than competitive dancers (competitive: $\bar{x}$=1.48, s.d= .58 n=27 versus non-competitive: $\bar{x}$ = 1.81, s.d= .57, n=26, t=2.07, df= 51, p<.04). Non-competitive dancers also felt that dance taught them discipline (competitive: $\bar{x}$=2.78, s.d= .97, n=27 versus non-competitive: $\bar{x}$ = 3.42, s.d= .86, n=26, t=2.56, df= 51, p<.01) in addition to strengthening their memorization skills as a result of memorizing and remembering dance steps (competitive: $\bar{x}$=2.37, s.d= .69, n=27 versus non-competitive: $\bar{x}$ = 3.04, s.d= .72, n=26, t=3.46, df= 51, p<.001). Non-competitive dancers experienced improved relationships with peers at school party due to dance class (competitive: $\bar{x}$=2.15, s.d= .66, n=27 versus non-competitive: $\bar{x}$ = 2.73, s.d= .60, n=26, t=3.34, df= 51, p<.002). Interestingly enough, non-competitive dancers expressed more sadness when the recital was over than competitive dancers (competitive: $\bar{x}$=2.74, s.d= .71, n=27 versus non-competitive: $\bar{x}$ = 3.46, s.d= .65, n=26, t=3.85, df= 51, p<.001).

Participants' perception of their parents' support of their dancing was significantly positively associated with subjects' reports of happiness during dance class (r= .57, p<.01) and feeling content while dancing (r= .53, p<.01). In addition, students whose parents supported their dancing correlated with dancing in front of friends and family (r= .33, p<.05). Several significant relationships were found that involved participants' social life in school. Comfort with peers at dance was also positively correlated with the participants

comfort with their own appearance ($r = .41$, $p < .01$). Significant positive correlations were found between enjoying school dances and helping relationships with peers at school ($r = .36$, $p < .01$). Lastly, comfort with peers at dance was associated with dance helping relationships with peers at school ($r = .44$, $p < .01$).

For the minority of students (15%) who reported that dance makes them hate their bodies, several relationships were discovered. Feeling comfortable with one's appearance was negatively correlated with hating one's body at dance ($r = -.53$, $p < .01$). Hating one's body was negatively correlated with feeling attractive at dance ($r = -.33$, $p < .05$) and also with eating dinner before dance class ($r = -.40$, $p < .01$). Feeling self-conscious in one's dance clothes was positively associated with hating one's body ($r = .75$, $p < .01$).

Confidence while dancing was positively correlated with feeling upset when recital time is over ($r = .47$, $p < .01$). Subjects who felt that dance helped their concentration abilities were more likely to report being able to memorize dance steps ($r = .63$, $p < .01$). There was also a relationship between dance classes helping memorization skills and reports of feeling better overall after going to dance class ($r = .29$, $p < .05$). A significantly positive correlation was found between feeling anxious and worried at dance class' and dance class making life more hectic for the participant ($r = .53$, $p < .01$).

Discussion

The majority of students (77%) in this sample saw dance class as having improved their level of self discipline. Most dance students felt that dance class helped them to release their feelings. Disputing the concern voiced elsewhere that dance education may place adolescent girls at risk of hypercritical attitudes toward their bodies, the majority of these students (85%) had not found dance to make them hate their bodies. In fact, the

majority of girls did not feel that dance contributed to the way in which they perceived their bodies. Although others have expressed concerns about overscheduling students' recreational time, most of the students felt that dance did not make their lives hectic (81%) and few (8%) reported feeling worried or anxious during dance class. Most girls felt that dance class improved both their concentration and confidence. Only about ten percent of these dance students did not feel better about themselves after dancing. This evidence of a salutary impact was largely consistent with the findings of the pilot study (Vicario & Chambliss, 2001).

The hypothesis that girls with greater dance experience would have higher self-esteem was only patially supported by the results. Girls who were more experienced appeared to have greater confidence in their dancing ability; however, they were not more likely to practice dance at home more than those with less dance experience. In general, being more experienced in the dance class setting may cause these girls to be happier at dance class than those who are less experienced and more self-conscious. The expectation that greater experience would tend to relate to greater comfort with appearance was not supported.

Girls who scored high on dance efficacy (based on rating their own dance ability) seemed to feel more attractive while dancing in addition to feeling more attractive at school. Girls who felt that they were good dancers expressed feelings of greater relaxation while dancing; while girls who rated themselves as average or less than average dancers indicated more feelings of clumsiness while dancing. This supports the hypothesis that girls that feel they are more capable dancers are more comfortable at dance class.

The parental support findings support that there is a congruence between girls' and their parents' attitudes toward this activity. Girls who most enjoy dance class have parents who most support it. The girls with supportive parents also enjoy performing more in front of friends and family. This is understandable because both girls and their parents have a common interest in dance. It is also possible that parental support enhances a girl's enjoyment of this pursuit. Future research using longitudinal methods could assess whether parental support exerts a causal influence upon a girl's dance experience, or whether parental attitudes are a consequence of a girl's reactions to dance.

This study found that extraversion did not reliably mediate the impact of dance education. Because of their common interest in dance, whether one is generally an introvert or extravert may not matter. Despite the fact that dance is an expression of the self, it is also a structured discipline. Extraverts may feel they need to tone down their outgoing nature in order to have an optimal dance experience. Similarly, introverts may feel the need to express themselves more outwardly in order for the class to be interactive.

The generalizability of the benefits of dance education was assessed in part by exploring students' school experiences. It was found that girls who credited dance with improving their peer relations enjoyed school dances more. These girls that were more comfortable with their own appearance were also more comfortable with their peers in dance class.

Dance efficacy was related to overall attractiveness, suggesting that the benefits of dance instruction are not simply situation-specific. Greater attractiveness at dance and at school was reported by those who felt they were better dancers. It is difficult to establish

whether dance makes these girls feel more attractive, or whether girls who feel they are highly attractive rate themselves as better dancers

In assessing the potential harms of dance instruction, the 15% of students who reported hating their bodies as a result of dance was evaluated in an attempt to understand this minority more thoroughly. These girls did not feel attractive while at dance and were generally more uncomfortable with their overall appearance. A possible reason why dance might have a negative effect on these few students would be because of typical dance attire. Tight clothes and mirrors are a devastating combination to those who do not feel comfortable with their bodies. It is also possible that in an attempt to look their best at dance class, they refrain from eating dinner before attending class, further compromising how they feel. Future research, using a larger sample of dance students, might explore this minority of "at risk" students more carefully. Changes in how dance education for adolescents is presented might make it possible to extend the current benefits to an even greater percentage of participants.

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